

CLAIMS

1. A method of forming products from lignocellulosic material in which said material is subjected to a binding operation using a phenol formaldehyde resin which is cured during said operation wherein at least one of maleic acid and maleic anhydride is added during the formation of such products so as to be in admixture with the resin when it is cured.
2. A method as claimed in claim 1 wherein the amount of maleic anhydride and/or maleic acid is 5% to 55% by weight based on the total weight of the resin and the/or maleic acid.
3. A method as claimed in claim 2 wherein the amount of maleic anhydride and/or maleic acid is 15% to 40% by weight based on the total weight of the resin and/or maleic acid.
4. A method as claimed in any one of claims 1 to 3 wherein the maleic acid and/or maleic anhydride is applied to the lignocellulosic material separately of application of the resin.
5. A method as claimed in any one of claims 1 to 3 wherein the maleic acid and/or maleic anhydride is admixed with the resin separately to application of the admixture of the lignocellulosic material.
6. A method as claimed in any on of claims 1 to 5 wherein the maleic acid and/or maleic anhydride are admixed with a wax emulsion.
7. A method as claimed in claim 6 wherein the wax emulsion is rendered more stable by the inclusion of a polybutene emulsion.

8. A method as claimed in any one of claims 1 to 7 which utilises maleic anhydride.
9. A method as claimed in any one of claims 1 to 8 wherein the phenol formaldehyde resin is a novolac resin.
10. A method as claimed in any one of claims 1 to 7 wherein the phenol formaldehyde is a resole resin.
11. A method as claimed in claim 10 wherein the resole resin has a pH of at most 11.5.
12. A method as claimed in claim 11 wherein the resole resin has a pH of at most 11.0.
13. A method as claimed in claim 12 wherein the resole resin has a pH of at most 10.5.
14. A method as claimed in claim 13 wherein the resole resin has a pH of about 10.
15. A method as claimed in any one of claims 1 to 14 wherein the method is applied to the bonding of lignocellulosic material to lignocellulosic material.
16. A method as claimed in claim 15 wherein the lignocellulosic material to be bonded is in the form of particles.
17. A method as claimed in claim 16 wherein the product is particle board.
18. In a method for manufacturing phenolic bonded lignocellulosic in which a mixture of lignocellulose particles and a phenolic resin are formed into a cured board under the action of heat and pressure, the improvement of providing in the mixture

prior to pressing to form the cured board, at least one of maleic anhydride and maleic acid.

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19. A method as claimed in any one of claims 15 to 18 wherein the amount of resin and maleic anhydride and/or maleic acid is 2% to 15% by weight of the dry lignocellulosic material.

20. A method as claimed in any one of claims 15 to 19 wherein the lignocellulosic material has a maximum water content of 14% by weight.

21. A method as claimed in any one of claims 16 to 20 wherein the product is orientated strand board.

22. A method as claimed in claim 15 wherein the product is plywood or other glued wood product.

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~~23. A method as claimed in any one of claims 1 to 14 applied to the bonding of lignocellulosic material to non-lignocellulosic material.~~

24. A method as claimed in claim 23 wherein the non-lignocellulosic material is a resin impregnated paper.